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09/924,731	08/08/2001	Sharad Sundaresan	MSFT-0688/180597.1	3961
41505 7590 06/23/2009 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891				
EXAMINER				
BILGRAMI, ASGHAR H				
ART UNIT		PAPER NUMBER		
2443				
MAIL DATE		DELIVERY MODE		
06/23/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

09/924,731

## Applicant(s)

SUNDARESAN ET AL.

## Examiner

ASGHAR BILGRAMI

## Art Unit

2443

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 19, 21-32, 34, 35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19, 21-32, 34, 35 and 37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/16/2009 has been entered.

***Specification***

2. The disclosure is objected to because of the following informalities: The specification fails to disclose claimed terminology in claim 32 "Computer storage readable medium" in the specification. Therefore specification is objected to for having lack of antecedent basis of the claimed terminology.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19, 22, 23, 25-32, 34, 35 & 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al (U.S. 6,801,949 B1), Hart (U.S. 6,154,765) and Brendel et al (U.S. 5,774,660).

5. As per claims 19, 32 & 35 Bruck disclosed, In a distributed computing system comprising a server cluster and a client computer, wherein the server cluster includes a first server and a second server and wherein the client computer includes a client application, a cache (col.17, lines 62-67 & col.18, lines 1-7), and a network access module (NAM) by which the client application communicates with the server cluster (col.2, lines 38-65) a method for providing seamless fail-over of communication between a client computer and the server cluster, the method comprising: detecting a failure of a first Virtual Interface Architecture (VIA) protocol connection between the first server in the in the server cluster and the client application (col.2, lines 38-65) ; the first connection established using connection information of the first server mapped to a server name and cluster name of the cluster server (col.9, lines 31-39); sending a Server Resolution Protocol request to the server cluster {"Address Resolution Protocol" in Bruck is analogous to "Server Resolution Protocol", they both perform the same functionality} (col.15, lines 20-65) , requesting connection information for a server associated with the server name and the cluster name of the server cluster (col.27, lines 23-45, figures 12, 23 & 38) receiving a Server Resolution Protocol response from the server cluster comprising connection information {connection information is a catchall for IP address ,network address and respective subnet} of the second server; caching

the received response in the cache of the client computer (col.17, lines 62-67 & col.18, lines 1-7) such that the cache contains a mapping between the connection information of the second server and the cluster name and the server name (col.15, lines 20-65) and establishing a second Virtual Interface Architecture Protocol connection between the client application and the second server using the connection information of the second server (col.27, lines 46-67 & col.8, lines 1-24). Although Burk did disclose that the server cluster provides a Highly available Internet Link to achieve transparent web server fail-over but Bruck did not explicitly disclose wherein the first and second connection are over a Virtual Interface Architecture (VIA) protocol and wherein the detecting, the sending, the receiving, and the establishing occur at the network access module, transparent to the client application. In the same filed of endeavor Hart disclosed wherein the first and second connection are over a Virtual Interface Architecture (VIA) protocol (col.8, lines 31-33) and wherein the detecting, the sending, the receiving, caching and the establishing are performed by the NAM to provide seamless fail-over connectivity in a manner, transparent to the client application (col.2, lines 21-25).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated the implantation Virtual interface Architecture protocol as disclosed by Hart into the method of seamless fail-over of communication between a client and a cluster of servers as disclosed by Bruck in order to make the system more scalable resulting in a more reliable network communication between network devices.

6. As per claim 22 Bruck-Hart-Brendel disclosed the method of claim 21, further comprising verifying that the second server maps to the server name (Burk, col.35, lines 46-67 & col.36, lines 7-17).

7. As per claim 23 Bruck-Hart disclosed the method of claim 22, wherein verifying that the second server maps to the server name comprises verifying that the second server is responsive to the server name (Burk, col.35, lines 46-67 & col.36, lines 7-17).

8. As per claim 25 Bruck-Hart disclosed the method of claim 19, wherein the Server Resolution Protocol request is sent by User Datagram Protocol (UDP) (Burk, col.14, lines 55-56 & col.15, lines 1-10)

9. As per claim 26 Bruck-Hart disclosed the method of claim 19, wherein the first server and second server store and retrieve relational data by way of Structured Query Language (SQL) commands (Burk, col.7, lines 30-37)

10. As per claim 27 Bruck-Hart disclosed the method of claim 19, wherein the first server is designated as active and the second server is designated as passive (Burk, col.2, lines 6-15)

11. As per claim 28 Bruck-Hart disclosed the method of claim 27, wherein the second server periodically sends a keep- alive message to the first server (Bruck, col.3,

lines 41-59).

12. As per claim 29 Bruck-Hart disclosed the method of claim 28, wherein the second server assumes designation as active when the first server fails to response to the keep-alive message (Bruck, col.3, lines 10-59).

13. As per claim 30 Bruck-Hart disclosed the method of claim 19, wherein the connection information provided in the server Resolution protocol response contains a plurality of port numbers, wherein each port number corresponded to a different communications protocol (Bruck, col.7, lines 30-37).

14. As per claim 31, 34 & 37 Bruck-Hart disclosed the method of claim 19, wherein the first connection and the second connection comprise VIA formatted packets (Hart, col.8, lines 30-33).

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 21, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al (U.S. 6,801,949 B1), Hart (U.S. 6,154,765) and Brendel et al (U.S. 5,774,660).

17. As per claim 21 Bruck-Hart disclosed the method of claim 19. However Bruck-Hart did not explicitly disclose wherein the establishing the second connection comprises retrieving a network address from the connection information of the second server from the cache. In the same field of endeavor Brendel disclosed the establishing the second connection comprises retrieving the network address of the second server from the cache (col.2, lines 41-52).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated the establishment of the second connection to the second server by utilization of the second server network address from the cache as disclosed by Brendel in the method of seamless failover of communication between a client and cluster of servers utilizing a Virtual Interface Architecture (VIA) as disclosed by Bruck and Hart in order to make the client and server connection more efficient resulting in a network system that is robust and reliable.

18. As per claim 24 Bruck-Hart disclosed the method of claim 19. However Bruck-Hart did not explicitly disclose further comprises purging the cache prior to caching the response from the second server. In the same field of endeavor Brendel disclosed



further comprises purging the cache prior to caching the response from the second server (Bruck, col.3, lines 40-49).

It would have been oblivious to one in the ordinary skill in the art at the time the invention was made to have incorporated purging the cache prior to caching the response from the second server as disclosed by Brendel in the method of seamless failover of communication between a client and cluster of servers utilizing a Virtual Interface Architecture (VIA) as disclosed by Bruck and Hart in order to make the client and server connection more efficient resulting in a network system that is robust and reliable.

#### ***Response to Arguments***

19. Applicant's arguments filed 1/15/2009 have been fully considered but they are not persuasive.

20. Applicant argued that the newly amended claim limitations are anticipated by the neither Burk nor Hart.

As to applicant's argument examiner has mapped the newly amended limitations to the pertinent sections of Burk in the office action above.

21. Applicant on the second paragraph of page10 alleged that the reliance on Bruck is wholly misplaced. Additionally Applicant argued that since Bruck did not explicitly disclose Virtual Interface Architecture protocol (VIA) therefore it is not a viable art.

Examiner respectfully disagrees with such assessment. Applicant's invention as claimed is about seamless failover between a client and a server cluster. Similarly Bruck is about seamless failover between a client and a server cluster. Figures 1 through 5 and col.2, lines 37-65 are evident that Burck and applicant's invention is trying to solve the same problem. Therefore Bruck is not wholly misplaced prior art. Additionally, as to applicant's second argument Bruck has clearly mentioned on col.7, lines 30-37 that TCP/IP is used as an illustration and other network protocols can also be utilized. Examiner notes that this is consistent with the applicant's disclosure on page 8 which states:

20 physical network end-point for the instance of the server 14 on the cluster. Such end-point could be a port number at which the server 14 is listening according to a TCP or VIA protocol, a pipe name for Named Pipes, or the like. The cluster and

Hence examiner introduced Hart which specifically mentioned VIA protocol in the same context as Bruck.

22. Applicant argued that neither Burk nor Hart disclose "Server Resolution protocol" as disclosed by the applicant.

As to applicant's argument the functionality of "Server Resolution Protocol " as disclosed by the applicant on pages 8 Lines 26-30 & page 9, lines 1-22 is identical to the "Address Resolution Protocol" disclosed by Burk. Therefore Burk discloses "server Resolution Protocol".

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASGHAR BILGRAMI whose telephone number is (571)272-3907. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L.M. Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. B./  
Examiner, Art Unit 2443

/Tonia LM Dollinger/  
Supervisory Patent Examiner, Art Unit 2443